

Good Fats Are Important!

The human body uses fatty acids to do everything from building cell membranes to performing key functions in the brain, eyes, and lungs. The functions of fats include:

- **Brain** - Fats compose 60% of the brain and are essential to brain function, including learning abilities, memory retention and moods.
- **Heart** - 60% of our heart's energy comes from burning fats. Specific fats are also used to help keep the heart beating in a regular rhythm.
- **Nerves** - Fats compose the myelin sheath that insulates and protects the nerves, isolating electrical impulses and speeding their transmission.
- **Lungs** - Lung surfactant, which requires a high concentration of saturated fats, enables the lungs to work and keeps them from collapsing.
- **Eyes** - Fats are essential to eye function, and are a key component of the rods and cones.
- **Digestion** - Fats in a meal slow down the digestion process so the body has more time to absorb nutrients. Fat-soluble vitamins (A, D, E, and K) can only be absorbed if fat is present. Fats in a meal, help provide a constant level of energy and keeps the body satiated for longer periods of time.
- **Hormones** - Fats are required to make hormones and hormone-like substances called prostaglandins found in every tissue, cell and organ in the body.
- **Skin & hair** - Ever heard of feeding oil to a dog to make their coat shiny? Humans get their soft skin and hair from fats.

The other key role of fats is for **energy**. The body burns fats for fuel and stores extra fuel in adipose tissue so that it always has reserves to draw from. Adipose is the most efficient way for the body to store energy. If the body were to store the same amount of energy in the form of carbohydrates, it would weigh twice as much and take up more space. Adipose also protects and cushions the organs, and like insulation in a house, keeps us warm.

Different kinds of fats

Fats are broken up into three families, and the poly-unsaturated family is further split into two groups:

- **Saturated**
- **Mono-unsaturated**
- **Poly-unsaturated**
- **Omega 3**
- **Omega 6**

It's important to note that one family is not more important than another. The body uses different fats in different places depending on what it needs to do. For instance,

poly-unsaturated fats are typically used by body parts that have the highest activity such as the brain and eyes. Each type of fat is vital to the body.

Foods in nature typically contain some combination of all three families of fats, and some foods contain more of one type than another. For example, avocados contain 28% saturated, 68% mono-unsaturated and 13% poly-unsaturated. Flax seeds are high in Omega 3 (63%) and sunflower seeds are high in Omega 6 (65%). Olives and nuts are typically high in the mono-unsaturated fats, and animal fat and coconut oil are high in saturated fats.

Essential fatty acids, or EFAs

Polyunsaturated fats are broken up into the Omega 6 family and the Omega 3 family. Each of these families has a “parent” fatty acid, also known as the essential fatty acids, or EFAs:

- Alpha-linolenic acid (also called ALA or LNA) - the parent fatty acid in the Omega 3 family.
- Linoleic acid (LA) - the parent fatty acid in the Omega 6 family.

Technically, as long as the body has the parent fatty acid, the rest of the family can be made by the body. However, the body cannot make the parent fatty acids, thus the term, “essential fatty acids.” When you hear the word “essential” in nutrition, it means the body can’t make it on its own and has to get it from an outside source.

The body functions optimally with a 2:1 balance of Omega 6 to Omega 3. Most Americans, however, are getting a 20:1 ratio. This imbalance is largely due to a high intake of vegetable oils, margarine, and processed foods made with partially hydrogenated soybean oil, all of which are high in Omega 6. To compensate, it’s important to add foods to your diet that are rich in Omega 3 or to supplement.

Omega 3 and Omega 6 fatty acids

Although most foods contain a combination of the different types of fatty acids, it is helpful to know which foods are good sources of certain types of fat in order to include them in your diet.

Foods high in Omega 3 include:

- flax seeds
- English walnuts
- cold-water fish (salmon, herring, mackerel)
- sardines

Foods high in Omega 6 include:

- sunflower seeds
- vegetable oils (corn, sunflower, sesame, soybean, safflower)
- margarine
- pumpkin seeds

Mono-unsaturated and saturated fats

Foods high in mono-unsaturated fats: **Foods high in saturated fats include:**

- olive oil
- avocado
- nuts (macadamia, peanuts, almonds, pecans, pistachios)
- animal products such as butter, cheese, and cream
- coconut, palm, and palm kernel oils.

What makes a fat bad?

Fats are good if they come from whole, natural, unprocessed foods. Fats are only bad if they become damaged. Fats are damaged by heat, light and oxygen. High heat and chemicals used by manufacturers to process oils are the chief sources of damaged fats. One particularly damaging process is partial hydrogenation, which gives oils longer shelf life. This process creates trans fats and other altered molecules that are harmful to the human body.

Poly-unsaturated fats are the most fragile. Oils that are high in poly-unsaturated fats (such as flax seed oil) must be refrigerated and kept in a dark container. Cooking with these oils damages the fats, depleting their nourishment, and creates oxidized fats and toxins. Oils that are best for cooking are those high in the mono-unsaturated fats (such as olive oil and macadamia nut oil) or ones that are high in saturated fat (such as coconut oil) because saturated fats are resistant to damage.

Trans fat

A trans fat is a normal fat molecule that has been twisted and deformed during the hydrogenation process. Trans fats mimic natural fats in some respects, but are unnatural to the human body. No amount of trans fats is healthy. If the diet does not contain enough good fat, the body will use the deformed trans fats instead. Studies have implicated trans fats as contributing to major health risks from heart disease to cancer.

The FDA now requires food manufacturers to list trans fats on nutrition labels. If the ingredients contain partially hydrogenated oil then the product is suspect, even if the label says no trans fats. To bypass the labeling rules, manufacturers sometimes decrease the serving size until the number of trans fats is less than .5 grams, which regulations permit listing as “zero” trans fats.

Common sources of trans fats (i.e. the 'bad' fats) include:

- margarine
- vegetable shortening
- doughnuts
- processed food containing partially hydrogenated oils such as: hot chocolate, peanut butter, energy

- fried fast-food bars, crackers, cookies, cakes, pastries, biscuits, chips, imitation cheese, microwave popcorn and other snack foods

Problems with a low-fat diet

Won't I get fat if I eat fat?

Eating good fat causes the body to be satiated quicker and longer than occurs with the consumption of carbohydrates and refined sugars. Therefore, you will eat less. Good fat, especially in conjunction with fiber and protein in whole foods, will be readily accessible for our needs, and satisfy our food cravings, without dangerous sugar spikes.

Americans are turning to low-fat and no-fat processed foods in a misguided effort to keep their weight down. Ironically, these processed foods are one of the main culprits in weight gain because these foods are typically “high glycemic.” High glycemic foods cause the level of blood sugar to spike (to rise suddenly). Sustained high blood sugar levels are so destructive that the body attempts to get the sugar out of the blood fast to minimize any damage. One way the body will do that is to signal the liver to take the sugar from the blood and turn it into “long chain” sticky saturated fat – the exact kind we are trying to avoid. The liver will create more fat than the body can immediately use, so the extra fat is stored in the adipose tissue (e.g. on our hips). Ironically, pulling the good fat out of the food causes the body to build up the kind of fat we're trying to avoid.

Getting good fats into my diet

What About Coconut?

Coconuts are 92% saturated fat, which often makes people avoid them. But all saturated fats are not created equal. 65% of the saturated fats found in coconut are what is called “medium chain.” Medium chain fats have unique characteristics that set them apart from the other fats. One is that they do not require bile from the liver for digestion, so they are quickly absorbed and used by the body for quick energy. Medium chain fats also protect the body from disease by disabling and killing bacteria, viruses, and parasites.

Manufacturers pull out these medium chain fats and sell them as a separate supplement called MCT oil. This oil is good for people with liver/gallbladder issues who need the energy from fat but have trouble digesting it. Athletes also use this oil for quick energy.

- Eat fats and oils directly from whole foods without any processing or heat. Raw nuts & seeds, avocados, and olives are good examples.
- Purchase oils that are processed as minimally as possible. Look for words such as “cold expeller pressed”, and “extra-virgin.”
- Make your own salad dressings with pure oils. Typical ready-made salad dressings are made with inferior, overly-processed, damaged oils.
- Be diligent about getting Omega 3 fats into your diet with either whole foods (such as flax seeds) or by taking supplements.
- Avoid foods containing partially hydrogenated oils and deep fried fast foods.
- Avoid animal fat since the highest concentration of toxins in animals will be found in their fat. This is why it is especially important to buy organic dairy.

How much ‘good’ fat is okay in my diet?

All fats contain different amounts of saturated, monounsaturated and polyunsaturated fatty acids. There isn’t one right amount for every diet, but should be based on the amount of calories consumed.

That being said, the usual recommended amount of fat in a diet is 30% of total calories a day, with no more than 5% coming from poly-unsaturated fat. Omega 3 fatty acids should be 2-3% of total calories and omega 6 should be 1-1.5% of total calories. A 2:1 ratio of Omega 6 to Omega 3 is best. In a 2000 calorie diet that means:

- 56g (500 calories) of mono-unsaturated and saturated fat
- 3.7g (33 calories) of Omega 3
- 7.3g (66 calories) of Omega 6

The best sources of fats come from raw, unprocessed whole foods. The following table (from the ESHA Food Processor and USDA Handbook 8) provides examples of foods and how much of the different types of fat they contain.

Foods and Their Different Fat Contents

Food	Saturated	Mono-unsaturated	Omega 6	Omega 3
Avocado (1 cup)	6g	25.8g	4.43g	.26g
Flax seeds (2 tbs)	.6g	1.3g	.84g	3.51g
Olive oil (1 tbs)	2g	10.8g	1.12g	.1g
Peanut butter (2 tbs)	3.3g	7.8g	4.38g	.02g
Almonds (2 tbs)	.9g	6.0g	1.86g	.07g
Cheddar Cheese (2 oz)	12g	5.3g	.33g	.21g
Salmon (chinook/ 3.5 oz)	3.2g	5.7g	.33g	1.83g
Tuna (white/ water / canned drained	1.4g	1.3g	.18g	1.6g

Typical serving sizes of fats

Knowing typical serving sizes for fats will help you keep them proportionate to total calories in your diet. Examples of food that are good sources of fat and serving sizes are:

- Oils (olive, canola, peanut, sesame) – 1 tablespoon
- Flax seeds – 2 tablespoons
- Avocado – 1/2 avocado
- Nuts (almond, cashews, walnuts) – 2 tablespoons
- Black olives – 8 or Green olives – 10

References and resources for healthy fats

General information

[The Oiling of America](#) – Article, by Mary Enig, Ph.D. and Sally Fallon, describes the history of fats and oils in America and the scientific controversy over the association between fat consumption and heart disease. Dr. Mary Enig is a recognized international expert in lipid biochemistry and was instrumental in bringing to light the dangers of trans fats and their inclusion on nutrition labels. (Weston A Price Foundation)

[The Importance of Saturated Fats for Biological Functions](#) – Explains how saturated fatty acids help the body work. (Weston A Price Foundation)

[Healthy Fats](#) – Explains what types of fats and how much of them should be included in a healthy diet. Includes a chart listing typical serving sizes. (University of Michigan)

[Dietary fats: Know which types to choose](#) – Explains differences between types of fats and gives tips for making good dietary choices. (MayoClinic.com)

[Flax Seed](#) – Reviews the benefits of flax seeds and how best to incorporate them in your diet. (UC Berkeley Wellness Letter Guide to Dietary Supplements)

Trans fats

[Trans Fatty Acids are not Formed by Heating Vegetable Oils](#) – Dr. Mary Enig looks at misinformation on how trans fats are formed. (Weston A Price Foundation)

Fats and heart disease

[Fats & Cholesterol](#) – Discusses the relationship between fats and cholesterol and cholesterol's effect on heart disease. (Harvard School of Public Health)

[Heart-Healthy Fats](#) – Provides information about how good fats can have a positive effect on the heart. (Prevention)

[Low-Fat Diet Does Not Cut Health Risks, Study Finds](#) – The largest study ever to ask whether a low-fat diet reduces the risk of getting cancer or heart disease has found that the diet has no effect. (New York Times)

Fats and breast cancer

[The Skinny on Fats and Breast Cancer](#) – Describes the link between trans fats and breast cancer and the preventative quality of good fats. (Townsend Letter for Doctors & Patients)

Guest article by Mary Toscano, Certified Nutrition Educator, Mary's video [Fabulous Fats! Setting the Record Straight](#) is an entertaining nutrition primer about the importance of fats for a healthy body, how to incorporate good fats into the diet, and how to avoid damaged fats. Edited by Gina Kemp, M.A. Last modified on: 2/5/07.